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10/626,079	07/24/2003	Robert Lombardi	0263421-0040	9962
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CHOATE, HALL & STEWART LLP TWO INTERNATIONAL PLACE BOSTON, MA 02110			EXAMINER BRINSON, PATRICK F	
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			3754	

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter recited in claims 5, 23 and 28 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 16 is objected to because of the following informalities: Claim 16 is dependent from cancelled claim 15. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-14, 16-22, 24-27, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,535,102 to **Allewitz et al.**

The patent to **Allewitz et al.** discloses a pulse damper comprising a pressure assembly having first (45) and second (46) passage fittings providing fluidic communication between an interior and exterior of the pressure assembly. First (25) and second (26) collars sealing connected to the first and second passage fittings and a resilient diaphragm (20) having first and second ends, wherein the first and second ends are sealingly connected to an exterior of the first and second collars, respectively. A tube

(60) is disclosed between the collars and having two ends, wherein both ends have a notches or slots (61') providing fluidic communication between an interior of the tube and an interior of the diaphragm. It is disclosed, col. 3, lines 43-47, that the unit is pre-charged with gas under pressure through valve (40) which will cause the chamber (12) to be charged with gas so that the deformable bladder will move inwardly against the outer periphery of the stack of tube (60). With the pressure within chamber pushing the bladder against the tube, it is inherent that fluid will flow into the tube, through the tube and into the bladder and because of the pressure exerted by the bladder, substantially all of the water will leave the tank before a second amount of water will enter. **Allewitz et al.** teaches, fig. 3, the notches or slots extending substantially to the end of the tube, but does not disclose the notches opening to the end of the tube. At the time the invention was made, it would have been an obvious design choice to a person of ordinary skill in the art to form the notches to open to the end of the tube of **Allewitz et al.** because Applicant has not disclosed that having the notches opened to the end of the tube provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the notches near the end as suggested by **Allewitz et al.** because the notches near the end function equally to allow fluidic connection between the tube and the interior of the diaphragm. Therefore, it would have been an obvious matter of design choice to

modify **Allewitz et al.** to obtain the invention as specified in claims 1, 22, 27 and 31.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to form the ends as domes that are welded to the shell or to form the assembly as two domes welded to one another because Applicant has not disclosed that these features provide an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the collars and fitting welded to the housing as taught by **Allewitz et al.** Therefore, it would have been an obvious matter of design choice to modify **Allewitz et al.** to obtain the invention as specified in claims 3, 4, 10, 12 and 17.

4. Claims 1-14, 16-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,418,969 to **Bertagna**.

The patent to **Bertagna** discloses a pulse damper comprising a pressure assembly having first and second (46) passage fittings providing fluidic communication between an interior and exterior of the pressure assembly. First and second collars (42) integrally connected to the first and second passage fittings and a resilient diaphragm (22) having first and second ends, wherein the first and second ends are sealingly connected to an exterior of the first and second collars, respectively. A tube (18) is disclosed between the collars and having two ends, wherein both ends are disclosed as having a notch or aperture providing fluidic communication between

an interior of the tube and an interior of the diaphragm. Col. 2, lines 63-65 discloses that the pipe may be perforated to allow for fluidic communication between the tube and the region (23), thus providing for the middle portion of the diaphragm to have a larger diameter than the outer ends when water flow through the notches, as shown in fig. 5. Col. 3, lines 12-18, disclose that in operation the region (24) between the sleeve and bladder is pressurized through valve (26), thereby pressing the bladder elastically against the pipe (18). Therefore, in normal operation, there is substantially no dead space external to the pipe such that potential contamination, which can occur from stagnant water, is limited. **Bertagna** does not teach the notches and/or apertures extending to the end of the tube or being placed at the end of the tube. At the time the invention was made, it would have been an obvious design choice to a person of ordinary skill in the art to form the notches at the end of the tube and/or to open the notches to the end of the tube of **Bertagna** because Applicant has not disclosed that having the notches at the end or opened to the end of the tube provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the notches near the end as suggested by **Bertagna** because the notches near the end function equally to allow fluidic connection between the tube and the interior of the diaphragm. Therefore, it would have been an obvious matter of design choice to modify **Bertagna** to obtain the invention as specified in claims 1, 22, 27 and

31. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to form the ends as domes that are welded to the shell or to form the assembly as two domes welded to one another because Applicant has not disclosed that these features provide an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the housing crimped onto the fittings and collars as taught by **Bertagna**. Therefore, it would have been an obvious matter of design choice to modify **Bertagna** to obtain the invention as specified in claims 3, 4, 10, 12 and 17.

Response to Amendment

5. Applicant states, in response dated 29 April 2005, regarding the objection to the drawings that the recited feature of claim 5 was disclosed in figs. 1 and 2. It should be noted that these figures do not disclose the cross sectional area of the ends of the bladder being smaller than the cross-sectional area of the middle portion of the diaphragm. The ends of the bladder are clamped onto the collar in those figures and thus the diameter is smaller than the diameter of the middle portion. The bladder is flexible and since the chamber is pressurized by gas, it is possible that the bladder could flex into close proximity to the tube, thus making the middle portion diameter smaller than the diameter of the outer ends. Applicant is urged to refer to U.S. Patent

3,536,102 in comparison. In the '102 reference the ends of the bladder have a larger cross-sectional area at its ends than in the middle regardless of whether or not the diaphragm is inflated or deflated.

As to the newly added limitation of all of a first portion of water entering the space between the diaphragm and tube leaving prior to a second portion of water, it should be noted that both the **Allewitz et al.** and **Bertagna** references disclose the bladder being pressurized such that they would contact the tube, thus forcing any water out of the tank prior to a second surge of water entering that area. Bertagna specifically states that the purpose for such pressurization is to limit the occurrence of stagnant water in the tank. There is not seen how any particular structure of the present invention is patentably distinguished from the prior art in flushing out a first portion of fluid prior to a second surge of fluid entering the tank.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (571) 272-4897. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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P. F. Brinson
October 14, 2005